

EXAMINER'S AMENDMENT

An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on February 26, 2008, Mr. Michael Walsh requested an extension of time for 3 MONTHS and authorized the Director to charge the VISA credit card ending on #8182 the required fee of \$525 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

in the specification:

replace the paragraph bridging pages 4-5 with the following rewritten paragraph:

--In the embodiment as shown in Figure 1, the setup and operation of the low force release mechanism is illustrative of the novel qualities of the invention, namely, the distribution of the load force to the main structure and the structure of the trap, the use of an internal spring pin (2) and an internal spring (3) to eliminate ordinal locking of the trap; and the use of the internal geometry of the trap (9) to lock and hold its position. In Figure 1, the main housing/structure (1) has a cavity (1a) and a main shaft (1b). An

Art Unit: 3679

internal spring trigger (8) is inserted through a trigger/decoy hole (14) located on the side of the upper part of the main housing/structure (1). The hanger (12) is then pushed down and in turn pushes the internal spring pin (2) down, compressing the lift spring (4). When the internal spring pin (2) clears the hole that the internal spring trigger (8) was inserted, the trigger pin protrudes and locks the internal spring pin (2) in the down position such that the trigger (8) engages an engaging portion (2b) of the internal spring pin (2). Hanger (12), which is not attached to the internal spring pin (2), now serves as a point of external attachment to the main structure. The trap (9) is slide up the main shaft and inside the lower part of the main housing (1) (compressing the trap spring (5)) until the large internal diameter section of the trap (9) is above the ball bearing (6). This allows the ball bearings (6) to separate and release pin (7) to be pushed between them by the internal spring (3) located in a cavity (2a) of the internal spring pin (2), this will locks the trap (9) up. The container clips (13), which are examples of attachments by which a container is attached to the main structure and the trap, are then inserted through the slots (15) located on the side of lower part of the main housing (1). When the internal spring trigger pin (8) is pulled out of the main housing (1), the internal spring pin (2) is freed and is pushed up by the lift spring (4). This removes the release pin (7) from between the ball bearings (6). As such, the release pin, the lift spring, and the one or more ball bearings (or e.g., slugs) located in the main structure and within an internal geometry or hollowed portion of the trap interact with the geometry of the trap. The ball bearings (6) now retract and the trap (9) is pushed down by trap spring (5), releasing the container clips (13). As such, the release pin, the trap spring, and the one or more

ball bearings (or e.g., slugs) located in the main structure (1) and within an internal geometry of the trap interact with the geometry of the trap. The container clips simplify the setup by allowing insertion or removal after the mechanism has been armed and the trap locked. This significantly simplifies the setup. The mechanism as shown in Figure 1, amply demonstrates the multi-level trigger concept of the invention, which is the ability to lock the internal spring pin by inserting the internal spring trigger pin on any one or more levels.--

Replace the second paragraph on page 6 with the following rewritten paragraph:

--In order to show the advantage of the invention's characteristics, in particular the advantage of the hangar mechanism, a further embodiment is depicted in Figure 5. This embodiment is similar to that shown in Figure 1, but employs a different hangar design. In the low force release mechanism depicted in Figure 5, the internal spring pin with an extension (16) is pushed and held down, compressing the lift spring (4). Next, the trigger pin (8) is inserted through a trigger/decoy hole (14) located on the side of the upper part of the main housing/structure (1), locking the internal spring pin with an extension (16) in the down position. The trap (9) is slide up the main shaft and inside the lower part of the main housing (1) (compressing the trap spring (5)) until the large internal diameter section of the trap (9) is above the ball bearings (6). This allows the ball bearings (6) to separate and the release pin (7) to be pushed between them by the internal spring (3), which locks the trap (9) up. The container clips/attachments (13)

Art Unit: 3679

holding the container holding the objects or material to be released are then inserted through the slots (15) located on the side of lower part of the main housing (1). When the trigger pin (8) is pulled out of the main housing (1), the internal spring pin with an extension (16) is freed and is pushed up by the lift spring (4). This removes the release pin (7) from between the ball bearings (6). This causes the ball bearings (6) to retract, causing the trap (9) to be pushed down by the trap spring (5), and thereby releasing the container clips (13).- -

in the claims:

claims 3 and 12 - cancelled.

claim 7, has been rewritten as:

--A low-force release mechanism comprising:

a main structure including a cavity and a shaft;

a trap having a hollowed portion and being received by the main structure, the hollowed portion surrounding the shaft;

a moveable internal spring pin having an opened cavity and a retaining portion, the internal spring pin being located within the cavity of the main structure; the cavity of the spring pin having an internal spring to facilitate locking of the trap and the internal spring pin in any order;

a release pin located within the internal spring pin and extending into the shaft;

a lift spring interposed between the release pin and the main structure enabling the release pin to be biased;

at least one trigger being positioned in a hole of the main structure and engaging the retaining portion of the internal spring pin to retain the internal spring pin in a locked position;

attachments by which a container is attached to the main structure and the trap;
and

at least one ball bearing or slug located in the hollowed portion of the trap and the shaft, and interacting with the hollowed portion of the trap and the release pin;

the release pin being moveable to effect a locked position of the ball bearing or the slug against the trap;

whereby removing the trigger from the hole of the main structure unlocks the internal spring pin and the release pin to allow the ball bearing or the slug to retract thus releasing the trap which allows the attachments to be released.--;

claim 16, has been rewritten as:

--The low-force release mechanism of claim 7, further comprising a string attached to the trigger.--; and,

claim 17, has been rewritten as:

--The low-force release mechanism of claim 7, further comprising a trap spring interposed between the trap and the main structure.--

The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

reference characters "1a", "1b", "2a", and "2b" are to be placed in Figure 1A to identify the cavity of the main structure 1, the shaft of the main structure 1, the cavity of the internal spring pin 2, and the engaging portion of the internal spring pin 2. Further, the top portion of the main structure is to be drawn with a horizontal line to show that the top portion is a separate part enclosing the cavity of the main structure as originally filed. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Reasons for Allowance

The following is a statement of reasons for the indication of allowable subject matter:

regarding claim 7, the prior art of record does not disclose or suggest a low-force release mechanism comprising a moveable internal spring pin having an internal spring (line 6) in combination with a release pin located within the internal spring pin and extending into a shaft of a main structure (lines 9-10) and at least one trigger positioned in a hole of the main structure and engaging a portion of the moveable internal spring pin (lines 13-14). The closest prior art, De Pew, 3,065,011, discloses an internal spring pin 11 with an internal spring 31; however, there's no need to provide the trigger 38 engaging a portion of the moveable internal spring pin since the trigger in De Pew engages another intermediate ball release mechanism. Applicant's mechanism allows for the locking of the trap and the moveable internal spring pin in any order such that the trap is first locked and then the internal spring pin is locked thereafter, or vice versa. Decrane, 5,269,579, or Thompson, 845,693, merely teaches using a container with attachments.

regarding claims 13-17, these claims depend from claim 7.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30AM-6:00PM. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 3679

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/E. G./

Examiner, Art Unit 3679

March 11, 2008

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679